IN THE CLAIMS:

Please amend the claims as set forth below in marked-up form. In accordance with the revised amendment format, a clean copy of the claims has been omitted.

1. (Currently Amended) A method of determining a defect-free or ~~defect~~ defective semiconductor integrated circuit, comprising:

a first measurement step for measuring a quiescent power supply current (QPSC) of a first semiconductor integrated circuit (IC)~~,~~ a plurality of times in a predetermined interval after ~~stop of the~~ operation of the first IC has stopped;

a first data calculation step for calculating a first feature data indicating a feature(s) of the measured QPSCs of the first IC;

a second measurement step for measuring a QPSC of a second semiconductor IC~~,~~ a plurality of times in the same condition ~~to~~ as that of the first IC after ~~stop of the~~ operation of the second IC has stopped;

a second data calculation step for calculating a second feature data indicating a feature(s) of the measured QPSCs of the second IC; and

a comparison and determination step for comparing a ~~resemble~~ resemblance between the first feature data and the second feature data, and determining the first and second ICs as defect-free ICs when the ~~resemble~~ resemblance is high or the first and second ICs as ~~defect~~ defective ICs when the ~~resemble~~ resemblance is low.

2. (Original) A method according to claim 1, wherein the first and second ICs are formed on the same semiconductor wafer.

3. (Original) A method according to claim 2, wherein the IC comprises a complementary metal oxide semiconductor (CMOS) IC.

4. (Currently Amended) A method according to claim 1, wherein

one of the first and second ICs is decided as a reference IC~~,~~;

the second measurement step and the second calculation step are carried out for ~~other~~ another semiconductor IC as the second IC~~,~~; and

in the comparison and determination step, the second IC is determined as a defect-free IC when the ~~resemble~~ resemblance is high, or as a ~~defect~~ defective IC when the ~~resemble~~ resemblance is low.

5. (Currently Amended) A method according to claim 1, wherein

in the first data calculation step, a first average QPSC of the measured QPSCs of the first IC and a first plurality of QPSC deviations of the measured QPSCs of the first IC, which are ~~(~~the measured QPSCs of the first IC ~~-~~minus the first average~~)~~, are calculated~~,~~;

in the second data calculation step, a second average QPSC of the measured QPSCs of the second IC and a second plurality of QPSC deviations of the measured QPSCs of the second IC, which are ~~(~~the measured QPSCs of the second IC~~-~~ minus the second average~~)~~, are calculated~~,~~; and

the method further comprising a third data calculation step for performing a first regression analysis on the first plurality of QPSC deviations and the second plurality of QPSC deviations to produce a first regression line and calculating a gradient of the first regression line, performing a second regression analysis on the measured QPSCs of the first IC to produce a second regression line and calculating a predicted QPSC, and calculating a decision coefficient defined by the following formula~~, and~~:

$$1-\frac{\sum(\text{measured QPSCs of the second IC - predicted QPSC})^2}{\sum(\text{second deviation})^2}$$

wherein, in the comparison and determination step, the first and second ICs ~~are~~ resemble one another when the decision coefficient is greater than a limit value, and the deviation of the gradient and the ratio is in a predetermined range.

6. (Currently Amended) A method according to claim 1, wherein

in the first data calculation step, a first average QPSC of the measured QPSCs of the first IC, a first standard deviation of the measured QPSCs of the first IC, and first normalized values defined as ((the ~~measures~~measured QPSCs of the first IC-the first average)/the first standard deviation) are calculated~~,~~; and

in the second data calculation step, a second average of the measured QPSCs of the second IC, a second standard deviation of the measured QPSCs of the first IC, and second normalized values defined as ((the ~~measures~~ measured QPSCs of the second

IC-the second average)/the second standard deviation) are calculated~~,~~;

the method further comprising a third data calculation step for performing a first regression analysis on the first plurality of normalized values and the second plurality of normalized values to produce a first regression line and calculating a gradient of the first regression line, performing a second regression analysis on the first normalized values to produce a second regression line and calculating a predicted normalized value, calculating an average normalized value of the second plurality of normalized values, and calculating a decision coefficient defined by the following formula~~, and~~:

$$1-\frac{\sum(\text{second standard values - predicted standard value})^2}{\sum(\text{second standard values - average standard value})^2}$$

wherein, in the comparison and determination step, the first and second ICs ~~are~~ resemble one another when the decision coefficient is greater than a limit value, and the gradient is in a predetermined range.

7. (Currently Amended) A method according to claim 1, wherein

in the first data calculation step, a first average QPSC of the measured QPSCs of the first IC, a first standard deviation of the measured QPSCs of the first IC, and a first feature value defined by (the first average QPSC/the first standard deviation) are calculated~~,~~;

in the second data calculation step, a second average QPSC of the measured QPSCs of the second IC, a second standard

deviation of the measured QPSCs of the second IC, and a second feature value defined by (the second average QPSC/the second standard deviation) are calculated~~,~~;

and in the comparison and determination step, the first and second ICs ~~are~~ resemble one another when the first and second feature values are in a predetermined range.

8. (Currently Amended) A method according to claim 1, wherein

in the first data calculation step, a first average QPSC of the measured QPSCs of the first IC, first QPSC deviations, which are defined as ~~(~~the measured QPSCs of the first IC~~-~~ minus the first average QPSC~~)~~, and first feature values defined by (the first QPSC deviations/the first QPSC average) are calculated;~~,~~

in the second data calculation step, a second average QPSC of the measured QPSCs of the second IC, second QPSC deviations, which are defined as the measured QPSCs of the second IC~~-~~ minus the second average QPSC, and second feature values defined by (the second QPSC deviations/the second QPSC) are calculated~~,~~; and

in the comparison and determination step, the first and second ICs ~~are~~ resemble one another when the first and second feature data are in a predetermined range.

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Currently Amended) An apparatus for determining a defect-free or ~~defect~~ defective semiconductor integrated circuit, comprising:

a first measurement means for measuring a quiescent power supply current (QPSC) of a first semiconductor integrated circuit (IC)~~,~~ a plurality of times in a predetermined interval after ~~stop of the~~ operation of the first IC has stopped;

a first data calculation means for calculating a first feature data indicating a feature(s) of the measured QPSCs of the first IC;

a second measurement means for measuring a QPSC of a second semiconductor IC~~,~~ a plurality of times in the same condition ~~to~~ as that of the first IC after ~~stop of the~~ operation of the second IC has stopped;

a second data calculation means for calculating a second feature data indicating a feature(s) of the measured QPSCs of the second IC; and

a comparison and determination means for comparing a ~~resemble~~ resemblance between the first feature data and the second feature data, and determining the first and second ICs as defect-free ICs when the ~~resemble~~ resemblance is high or the first and second ICs as ~~defect~~ defective ICs when the ~~resemble~~ resemblance is low.

14. (Original) An apparatus according to claim 13, wherein the first and second ICs are formed on the same semiconductor wafer.

15. (Original) An apparatus according to claim 14, wherein the IC comprises a complementary metal oxide semiconductor (CMOS) IC.

16. (Currently Amended) An apparatus according to claim 13, wherein

one of the first and second ICs is decided as a reference IC~~,~~;

the second measurement means and the second calculation means operate for ~~other~~ another semiconductor IC as the second IC~~,~~; and

the comparison and determination means determines the second IC as a defect-free IC when the ~~resemble~~ resemblance is high, or as a ~~defect~~ defective IC when the ~~resemble~~ resemblance is low.

17. (Currently Amended) An apparatus according to claim 13, wherein

the first data calculation means calculates a first average QPSC of the measured QPSCs of the first IC and a first plurality of QPSC deviations of the measured QPSCs of the first IC which are defined ~~(~~ as the measured QPSCs of the first IC~~−~~ minus the first average~~),~~; and

the second data calculation means calculates a second average QPSC of the measured QPSCs of the second IC and second plurality of QPSC deviations of the measured QPSCs of the second IC, which are defined as ~~(~~the measured QPSCs of the second IC~~−~~ minus the second average~~),~~;

the apparatus further comprising a third data calculation means for performing a first regression analysis on the first

plurality of QPSC deviations and the second plurality of QPSC deviations to produce a first regression line and calculating a gradient of the first regression line, performing a second regression analysis on the measured QPSCs of the first IC to produce a second regression line and calculating a predicted QPSC, and calculating a decision coefficient defined by the following formula~~, and~~:

$$1-\frac{\sum(\text{measured QPSCs of the second IC - predicted QPSC})^2}{\sum(\text{second deviation})^2}$$

wherein~~,~~ the comparison and determination means ~~comprises~~ compares the first and second ICs and decides ~~the~~ both resemble one another when the decision coefficient is greater than a limit value, and the deviation of the gradient and the ratio is in a predetermined range.

18. (Currently Amended) An apparatus according to claim 13, wherein

the first data calculation means calculates a first average QPSC of the measured QPSCs of the first IC, a first standard deviation of the measured QPSCs of the first IC, and first normalized values defined as ((the measured~~measures~~ QPSCs of the first IC-the first average)/the first standard deviation)~~,~~; and

the second data calculation means calculates a second average of the measured QPSCs of the second IC, a second standard deviation of the measured QPSCs of the first IC, and second normalized values defined as ((the ~~measures~~ measured QPSCs of the second IC-the second average)/the second standard deviation)~~,~~;

the apparatus further comprising a third data calculation means for performing a first regression analysis on the first plurality of normalized values and the second plurality of normalized values to produce a first regression line and calculating a gradient of the first regression line, performing a second regression analysis on the first normalized values to produce a second regression line and calculating a predicted normalized value, calculating an average normalized value of the second plurality of normalized values, and calculating a decision coefficient defined by the following formula~~, and~~:

$$1-\frac{\sum(\text{second standard values - predicted standard value})^2}{\sum(\text{second standard values - average standard value})^2}$$

wherein~~,~~ the comparison and determination means compares the first and second ICs and decides ~~the~~ both resemble one another when the decision coefficient is greater than a limit value, and the gradient is in a predetermined range.

19. (Currently Amended) An apparatus according to claim 13, wherein

the first data calculation means calculates a first average QPSC of the measured QPSCs of the first IC, a first standard deviation of the measured QPSCs of the first IC, and a first feature value defined by (the first average QPSC/the first standard deviation)~~,~~;

the second data calculation means calculates a second average QPSC of the measured QPSCs of the second IC, a second standard deviation of the measured QPSCs of the second IC, and a

second feature value defined by (the second average QPSC/the second standard deviation)~~,~~; and

the comparison and determination means compares the first and second ICs and decides ~~the~~ both resemble one another when the first and second feature values are in a predetermined range.

20. (Currently Amended) An apparatus according to claim 13, wherein

the first data calculation means calculates a first average QPSC of the measured QPSCs of the first IC, first QPSC deviations, which are defined as ~~(~~the measured QPSCs of the first IC~~-~~minus the first average QPSC~~)~~, and first feature values defined by (the first QPSC deviations/the first QPSC average)~~,~~;

the second data calculation means calculates a second average QPSC of the measured QPSCs of the second IC, second QPSC deviations, which are defined as the measured QPSCs of the second IC~~-~~ minus the second average QPSC, and second feature values defined by (the second QPSC deviations/the second QPSC)~~,~~; and

the comparison and determination means compares the first and second ICs and decides ~~the~~ both resemble one another when the first and second feature data are in a predetermined range.

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (New) A method of determining a defect-free or defective semiconductor integrated circuit, comprising:

a first measurement step for measuring a quiescent power supply current (QPSC) of a first semiconductor integrated circuit (IC) a plurality of times in a predetermined interval after operation of the first IC has stopped;

a first data calculation step for calculating a first feature data indicating a feature(s) of the measured QPSCs of the first IC;

a second measurement step for measuring a QPSC of a second semiconductor IC a plurality of times in the same condition as that of the first IC after operation of the second IC has stopped;

a second data calculation step for calculating a second feature data indicating a feature(s) of the measured QPSCs of the second IC; and

a comparison and determination step for comparing a resemblance between the first feature data and the second feature data, and determining the first and second ICs as defect-free ICs when the resemblance is high or the first and second ICs as defective ICs when the resemblance is low; wherein

in the first data calculation step, a first average QPSC of the measured QPSCs of the first IC and a first plurality of QPSC deviations of the measured QPSCs of the first IC, which are the measured QPSCs of the first IC minus the first average, are calculated;

in the second data calculation step, a second average QPSC of the measured QPSCs of the second IC and a second plurality of

QPSC deviations of the measured QPSCs of the second IC, which are the measured QPSCs of the second IC minus the second average, are calculated; and

the method further comprising a third data calculation step for performing a first regression analysis on the first plurality of QPSC deviations and the second plurality of QPSC deviations to produce a first regression line and calculating a gradient of the first regression line, performing a second regression analysis on the measured QPSCs of the first IC to produce a second regression line and calculating a predicted QPSC, and calculating a decision coefficient defined by the following formula:

$$1-\frac{\sum(\text{measured QPSCs of the second IC - predicted QPSC})^2}{\sum(\text{second deviation})^2}$$

wherein, in the comparison and determination step, the first and second ICs resemble one another when the decision coefficient is greater than a limit value, and the deviation of the gradient and the ratio is in a predetermined range.

26. (New) A method of determining a defect-free or defective semiconductor integrated circuit, comprising:

a first measurement step for measuring a quiescent power supply current (QPSC) of a first semiconductor integrated circuit (IC) a plurality of times in a predetermined interval after operation of the first IC has stopped;

a first data calculation step for calculating a first feature data indicating a feature(s) of the measured QPSCs of the first IC;

a second measurement step for measuring a QPSC of a second semiconductor IC a plurality of times in the same condition as that of the first IC after operation of the second IC has stopped;

a second data calculation step for calculating a second feature data indicating a feature(s) of the measured QPSCs of the second IC; and

a comparison and determination step for comparing a resemblance between the first feature data and the second feature data, and determining the first and second ICs as defect-free ICs when the resemblance is high or the first and second ICs as defective ICs when the resemblance is low; wherein

in the first data calculation step, a first average QPSC of the measured QPSCs of the first IC, a first standard deviation of the measured QPSCs of the first IC, and first normalized values defined as ((the measured QPSCs of the first IC-the first average)/the first standard deviation) are calculated; and

in the second data calculation step, a second average of the measured QPSCs of the second IC, a second standard deviation of the measured QPSCs of the first IC, and second normalized values defined as ((the measured QPSCs of the second IC-the second average)/the second standard deviation) are calculated;

the method further comprising a third data calculation step for performing a first regression analysis on the first plurality of normalized values and the second plurality of normalized values to produce a first regression line and calculating a gradient of the first regression line, performing a second regression analysis on the first normalized values to produce a second regression line and calculating a predicted normalized value, calculating an average normalized value of the

second plurality of normalized values, and calculating a decision coefficient defined by the following formula:

$$1-\frac{\sum(\text{second standard values - predicted standard value})^2}{\sum(\text{second standard values - average standard value})^2}$$

wherein, in the comparison and determination step, the first and second ICs resemble one another when the decision coefficient is greater than a limit value, and the gradient is in a predetermined range.

27. (New) A method of determining a defect-free or defective semiconductor integrated circuit, comprising:

a first measurement step for measuring a quiescent power supply current (QPSC) of a first semiconductor integrated circuit (IC) a plurality of times in a predetermined interval after operation of the first IC has stopped;

a first data calculation step for calculating a first feature data indicating a feature(s) of the measured QPSCs of the first IC;

a second measurement step for measuring a QPSC of a second semiconductor IC a plurality of times in the same condition as that of the first IC after operation of the second IC has stopped;

a second data calculation step for calculating a second feature data indicating a feature(s) of the measured QPSCs of the second IC; and

a comparison and determination step for comparing a resemblance between the first feature data and the second feature data, and determining the first and second ICs as

defect-free ICs when the resemblance is high or the first and second ICs as defective ICs when the resemblance is low; wherein

in the first data calculation step, a first average QPSC of the measured QPSCs of the first IC, a first standard deviation of the measured QPSCs of the first IC, and a first feature value defined by (the first average QPSC/the first standard deviation) are calculated;

in the second data calculation step, a second average QPSC of the measured QPSCs of the second IC, a second standard deviation of the measured QPSCs of the second IC, and a second feature value defined by (the second average QPSC/the second standard deviation) are calculated;

and in the comparison and determination step, the first and second ICs resemble one another when the first and second feature values are in a predetermined range.

28. (New) A method of determining a defect-free or defective semiconductor integrated circuit, comprising:

a first measurement step for measuring a quiescent power supply current (QPSC) of a first semiconductor integrated circuit (IC) a plurality of times in a predetermined interval after operation of the first IC has stopped;

a first data calculation step for calculating a first feature data indicating a feature(s) of the measured QPSCs of the first IC;

a second measurement step for measuring a QPSC of a second semiconductor IC a plurality of times in the same condition as that of the first IC after operation of the second IC has stopped;

a second data calculation step for calculating a second feature data indicating a feature(s) of the measured QPSCs of the second IC; and

a comparison and determination step for comparing a resemblance between the first feature data and the second feature data, and determining the first and second ICs as defect-free ICs when the resemblance is high or the first and second ICs as defective ICs when the resemblance is low; wherein

in the first data calculation step, a first average QPSC of the measured QPSCs of the first IC, first QPSC deviations, which are defined as the measured QPSCs of the first IC minus the first average QPSC, and first feature values defined by (the first QPSC deviations/the first QPSC average) are calculated;

in the second data calculation step, a second average QPSC of the measured QPSCs of the second IC, second QPSC deviations, which are defined as the measured QPSCs of the second IC minus the second average QPSC, and second feature values defined by (the second QPSC deviations/the second QPSC) are calculated; and

in the comparison and determination step, the first and second ICs resemble one another when the first and second feature data are in a predetermined range.

29. (New) A method according to any one of claims 25, 26, 27 or 28 wherein the first and second ICs are formed on the same semiconductor wafer

30. (New) A method according to claim 29, wherein the IC comprises a complementary metal oxide semiconductor (CMOS) IC.

31. (New) A method according to any one of claims 25, 26, 27 or 28, wherein

one of the first and second ICs is decided as a reference IC;

the second measurement step and the second calculation step are carried out for another semiconductor IC as the second IC; and

in the comparison and determination step, the second IC is determined as a defect-free IC when the resemblance is high, or as a defective IC when the resemblance is low.

32. (New) An apparatus for determining a defect-free or defective semiconductor integrated circuit, comprising:

a first measurement means for measuring a quiescent power supply current (QPSC) of a first semiconductor integrated circuit (IC) a plurality of times in a predetermined interval after operation of the first IC has stopped;

a first data calculation means for calculating a first feature data indicating a feature(s) of the measured QPSCs of the first IC;

a second measurement means for measuring a QPSC of a second semiconductor IC a plurality of times in the same condition as that of the first IC after operation of the second IC has stopped;

a second data calculation means for calculating a second feature data indicating a feature(s) of the measured QPSCs of the second IC; and

a comparison and determination means for comparing a resemblance between the first feature data and the second feature data, and determining the first and second ICs as

defect-free ICs when the resemblance is high or the first and second ICs as defective ICs when the resemblance is low; wherein

the first data calculation means calculates a first average QPSC of the measured QPSCs of the first IC and a first plurality of QPSC deviations of the measured QPSCs of the first IC which are defined as the measured QPSCs of the first IC minus the first average; and

the second data calculation means calculates a second average QPSC of the measured QPSCs of the second IC and second plurality of QPSC deviations of the measured QPSCs of the second IC, which are defined as the measured QPSCs of the second IC minus the second average;

the apparatus further comprising a third data calculation means for performing a first regression analysis on the first plurality of QPSC deviations and the second plurality of QPSC deviations to produce a first regression line and calculating a gradient of the first regression line, performing a second regression analysis on the measured QPSCs of the first IC to produce a second regression line and calculating a predicted QPSC, and calculating a decision coefficient defined by the following formula:

$$1-\frac{\sum(\text{measured QPSCs of the second IC - predicted QPSC})^2}{\sum(\text{second deviation})^2}$$

wherein the comparison and determination means compares the first and second ICs and decides both resemble one another when the decision coefficient is greater than a limit value, and the deviation of the gradient and the ratio is in a predetermined range.

33. (New) An apparatus for determining a defect-free or defective semiconductor integrated circuit, comprising:

a first measurement means for measuring a quiescent power supply current (QPSC) of a first semiconductor integrated circuit (IC) a plurality of times in a predetermined interval after operation of the first IC has stopped;

a first data calculation means for calculating a first feature data indicating a feature(s) of the measured QPSCs of the first IC;

a second measurement means for measuring a QPSC of a second semiconductor IC a plurality of times in the same condition as that of the first IC after operation of the second IC has stopped;

a second data calculation means for calculating a second feature data indicating a feature(s) of the measured QPSCs of the second IC; and

a comparison and determination means for comparing a resemblance between the first feature data and the second feature data, and determining the first and second ICs as defect-free ICs when the resemblance is high or the first and second ICs as defective ICs when the resemblance is low; wherein

the first data calculation means calculates a first average QPSC of the measured QPSCs of the first IC, a first standard deviation of the measured QPSCs of the first IC, and first normalized values defined as ((the measured QPSCs of the first IC-the first average)/the first standard deviation); and

the second data calculation means calculates a second average of the measured QPSCs of the second IC, a second standard deviation of the measured QPSCs of the first IC, and

second normalized values defined as ((the measured QPSCs of the second IC-the second average)/the second standard deviation);

the apparatus further comprising a third data calculation means for performing a first regression analysis on the first plurality of normalized values and the second plurality of normalized values to produce a first regression line and calculating a gradient of the first regression line, performing a second regression analysis on the first normalized values to produce a second regression line and calculating a predicted normalized value, calculating an average normalized value of the second plurality of normalized values, and calculating a decision coefficient defined by the following formula:

$$1-\frac{\sum(\text{second standard values - predicted standard value})^2}{\sum(\text{second standard values - average standard value})^2}$$

wherein the comparison and determination means compares the first and second ICs and decides both resemble one another when the decision coefficient is greater than a limit value, and the gradient is in a predetermined range.

34. (New) An apparatus for determining a defect-free or defective semiconductor integrated circuit, comprising:

a first measurement means for measuring a quiescent power supply current (QPSC) of a first semiconductor integrated circuit (IC) a plurality of times in a predetermined interval after operation of the first IC has stopped;

a first data calculation means for calculating a first feature data indicating a feature(s) of the measured QPSCs of the first IC;

a second measurement means for measuring a QPSC of a second semiconductor IC a plurality of times in the same condition as that of the first IC after operation of the second IC has stopped;

a second data calculation means for calculating a second feature data indicating a feature(s) of the measured QPSCs of the second IC; and

a comparison and determination means for comparing a resemblance between the first feature data and the second feature data, and determining the first and second ICs as defect-free ICs when the resemblance is high or the first and second ICs as defective ICs when the resemblance is low; wherein

the first data calculation means calculates a first average QPSC of the measured QPSCs of the first IC, a first standard deviation of the measured QPSCs of the first IC, and a first feature value defined by (the first average QPSC/the first standard deviation);

the second data calculation means calculates a second average QPSC of the measured QPSCs of the second IC, a second standard deviation of the measured QPSCs of the second IC, and a second feature value defined by (the second average QPSC/the second standard deviation); and

the comparison and determination means compares the first and second ICs and decides both resemble one another when the first and second feature values are in a predetermined range.

35. (New) An apparatus for determining a defect-free or defective semiconductor integrated circuit, comprising:

a first measurement means for measuring a quiescent power supply current (QPSC) of a first semiconductor integrated

circuit (IC) a plurality of times in a predetermined interval after operation of the first IC has stopped;

a first data calculation means for calculating a first feature data indicating a feature(s) of the measured QPSCs of the first IC;

a second measurement means for measuring a QPSC of a second semiconductor IC a plurality of times in the same condition as that of the first IC after operation of the second IC has stopped;

a second data calculation means for calculating a second feature data indicating a feature(s) of the measured QPSCs of the second IC; and

a comparison and determination means for comparing a resemblance between the first feature data and the second feature data, and determining the first and second ICs as defect-free ICs when the resemblance is high or the first and second ICs as defective ICs when the resemblance is low; wherein

the first data calculation means calculates a first average QPSC of the measured QPSCs of the first IC, first QPSC deviations, which are defined as (the measured QPSCs of the first IC-the first average QPSC), and first feature values defined by (the first QPSC deviations/the first QPSC average);

the second data calculation means calculates a second average QPSC of the measured QPSCs of the second IC, second QPSC deviations, which are defined as the measured QPSCs of the second IC minus the second average QPSC, and second feature values defined by (the second QPSC deviations/the second QPSC); and

the comparison and determination means compares the first and second ICs and decides both resemble one another when the first and second feature data are in a predetermined range.

36. (New) An apparatus according to any one of claims 32, 33, 34 or 35, wherein the first and second ICs are formed on the same semiconductor wafer

37. (New) An apparatus according to claim 36, wherein the IC comprises a complementary metal oxide semiconductor (CMOS) IC.

38. (New) An apparatus according to any one of claims 32, 33, 34 or 35, wherein

one of the first and second ICs is decided as a reference IC;

the second measurement means and the second calculation means operate for another semiconductor IC as the second IC; and

the comparison and determination means determines the second IC as a defect-free IC when the resemblance is high, or as a defective IC when the resemblance is low.